

REMARKS

Further and favorable reconsideration is respectfully requested in view of the foregoing amendments and following remarks.

Claims 1 and 4-12 are pending in this application.

Claim 11 has been amended to recite “wherein the organic fine particles adhere to the paper”, as suggested by the Examiner.

I. Personal Interview

Applicants appreciate the courtesies extended to Applicants’ attorney by Examiner Cordray during the personal interview held March 11, 2011.

First, the rejection under 35 U.S.C. § 112 was discussed. Applicants’ attorney stated that the method of claim 11 intends to adhere the organic fine particles to the paper by treating a specific paper (i.e., a paper comprising inorganic fiber and pulp-shaped fiber) with a specific aqueous liquid (i.e., specific organic fine particles dispersed or emulsified in water). The Examiner indicated that if claim 11 were amended as identified above, then the rejection would be withdrawn.

Next, the prior art rejections were discussed. Applicants’ attorney asserted that none of the cited references disclose “water where the concentration of cations excluding the metal ions bonded to said acidic group is not more than 1 ppm”, as recited in the methods of claims 10 and 11. The Examiner agreed that none of the cited references explicitly disclose this feature.

Applicants’ attorney argued that Nishida ‘265 provides no reason or motivation for one of ordinary skill in the art to limit the concentration of non-potassium cations in the water to not more than 1 ppm. The Examiner indicated that “no more than 1 ppm” this is a very low concentration of non-potassium cations in the water, and stated that in order to overcome the prior art rejections, Applicants should provide some reason(s) why it is impractical or impossible to reduce the concentration of non-potassium ions in the water to “not more than 1 ppm”. Alternatively, the Examiner indicated that Applicants should provide evidence of unexpected results in the form of a Declaration under 37 CFR 1.132 to demonstrate that having not more than 1 ppm of non-potassium ions results in superior properties.

Applicants have considered the Examiner’s comments and provide the following remarks and Declaration to (1) explain why it is impractical to produce the non-potassium cation

concentration in water to “not more than 1 ppm”, and (2) demonstrate unexpected results from having not more than 1 ppm of non-potassium ions.

II. Claim Rejection Under 35 U.S.C. § 112

The Examiner has rejected claims 1, 4-9 and 11 under 35 U.S.C. §112, second paragraph, as being indefinite. As agreed to during the personal interview, the rejection has been rendered moot in view of the amendment to claim 11.

Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

III. Claim Rejections Under 35 U.S.C. § 103

The Examiner rejects claims 1 and 4-12 under 35 U.S.C. §103(a) as being unpatentable over Belding et al. in view of Nishida (US ‘265), as evidenced by Lorah et al.; rejects claims 1, 4 and 6-12 under 35 U.S.C. §103(a) as being unpatentable over Belding et al. in view of Tanaka et al. and further in view of Nishida (US ‘265), as evidenced by Lorah et al.; and rejects claims 1 and 4-12 under 35 U.S.C. §103(a) as being unpatentable over Belding et al. in view of Nishida (US ‘797 or US ‘970) and further in view of Nishida (US ‘265), and as evidenced by Lorah et al. As applied to the amended claims, Applicants respectfully traverse the rejections.

The Examiner has acknowledged that Belding et al. do not disclose “organic fine particles”, and that none of the cited references disclose “water where the concentration of cations excluding the metal ions bonded to said acidic group is not more than 1 ppm”, as recited in the methods of claims 10 and 11. See Office Action, page 8, 1st full paragraph.

Nishida ‘265 teaches “the best result is available when all carboxyl groups contained in the polymer are changed to potassium ions” (see col. 4, lines 28-30). Moreover, in Examples 2-4 of the reference, polymers prepared with potassium ions demonstrated the best result. However, the reference fails to disclose or suggest limiting the amount of non-potassium ions in the water. In addition, the reference states “there is no particular limitation for the ratio of potassium ion to other ions” (see col. 4, lines 35-37).

Lorah et al., Tanaka et al., Nishida US ‘797 and Nishida US ‘970 also provide no reason or rationale to use water where the concentration of cations excluding the metal ions bonded to said acidic group is not more than 1 ppm.

As discussed in the enclosed Declaration, it is impractical to reduce the concentration of non-potassium ions in water to not more than 1 ppm, because it would require subjecting the water to an expensive and time-consuming distillation or ion-exchange treatment (see

Declaration, page 2). Natural water, tap water and industrial water contain many cations and reducing the concentration of non-potassium ions to not more than 1 ppm requires significant time and expense. Therefore, one of ordinary skill in the art would not have had any reason or motivation to use water “where the concentration of cations excluding the metal ions bonded to said acidic group is not more than 1 ppm” because it is clearly impractical in the paper-making process.

In addition, the methods of claims 10 and 11, where the concentration of cations excluding the metal ions bonded to the acidic group is not more than 1 ppm, produce a paper having unexpected results over the art in terms of improved saturated moisture adsorption rate.

In the Declaration, comparative experiments are presented based upon Example 6 of the present specification. The preparation method of organic fine particles F used therein is similar to that of organic fine particles E described in paragraph [0063] of the specification. As can be seen from the table on page 4 of the Declaration, the difference in the non-potassium cation concentration between Example A and Comparative Example B is not too large. However, the difference in the saturated moisture absorption rate is unexpectedly large, because of the tremendous amount of water used in the paper-making process.

Thus, by making the non-potassium ion concentration in the water not more than 1 ppm in the method of Example A, the saturated moisture adsorption rate of the obtained paper is unexpectedly improved over Comparative Example B.

Therefore, the methods of claims 10 and 11, where the concentration of cations excluding the metal ions bonded to the acidic group is not more than 1 ppm, produce a paper having unexpected results over the art.

Accordingly, claims 10 and 11 would not have been obvious over the references.

Claims 1, 4-9 and 12 depend directly or indirectly from claim 10 or 11, and thus also would not have been obvious over the references.

Therefore, reconsideration and withdrawal of the rejections are respectfully requested.

IV. Conclusion

For these reasons, Applicants take the position that the presently claimed invention is clearly patentable over the applied references.

Therefore, in view of the foregoing amendments and remarks, it is submitted that the rejections set forth by the Examiner have been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

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